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BOOK REVIEW

British Tortricoid Moths, Cochylidae and Tortricidae: Tortricinae, by J. D. Bradley, W. G. Tremewan, and Arthur Smith. 1973. The Ray Society, c/o British Museum (Natural History), London. viii + 251 p., 51 fig., 47 pl. (pl. 22-47 in color). Price: £14.50 ($34.80 U.S.).

Sumptuous is a good word to describe this first volume of a two volume faunal review of the British tortricoid moths. The intended audience is stated to be the non-specialist, with the book emphasizing wing coloration and biologies. This first volume covers 48 species of Cochylidae (= Phaloniidae), followed by the tortricid subfamily Tortricinae (94 spp.). The second volume will cover the remaining Olethreutinae (227 spp.). Every species validly known to occur in England, Scotland, and Ireland is illustrated with color figures very accurately painted by Arthur Smith (Cochylidae and 1 sp. of Tortricinae) and Brian Hargreaves (most Tortricinae). Some tortricids have so many morphs that in three cases a full plate is devoted to one species, making the book exemplary in its illustration of tortricid polymorphism. A few species are included in the text but not illustrated, as they are stated to be strays or short-lived introductions. Virtually all of the 142 included species are widespread in Europe and many occur throughout the Palearctic region, often as far as Japan. Of the included species, 23% are also found in North America: 5 Cochylidae and 27 Tortricinae (1 in Hawaii), some being of economic importance as well.

For all the good points, it is evident that little effort was made to economize: there is a gold embossed imprint on the front cover; volume size is large (quarto) and the print size is also large; the number of color plates is excessive for the size of the British fauna; and the halftones of larval host plant damage are widely spaced per plate. These items are marvelous for the bibliophile, but greatly increase the cost of the volume when ostensibly the intended audience is the British amateur collector: perhaps British amateurs have no problem with funds for books such as this one. The color reproduction of the adult moths is very well done, as is usual for the Curwen Press. Some of the figures are small, however, and could have benefited from added enlargement. An additional annoyance is the lack of text page

notations to the figure captions. The organization of the color figures into plates leaves much to be desired, since this relates so directly to the excessive cost of the work (increased in 1975 from the original price). Many plates have a great amount of empty space between figures. The number of color plates could have been reduced by 50% had the figures been arranged more closely together. With reduced plate number and smaller type, the authors undoubtedly could have achieved their stated original intention of encompassing the whole British tortricoid fauna in only one volume. It has long been my belief that the expense of color illustration can be eliminated by using sharp, enlarged (about 2 x 2 in.) black and white photographs (close cropped) of the left or right pair of wings. One then has the increased detail of enlargement of small species and the reduction in cost to the whole volume: color can be described quite well in the text.

Overall, the book is an exceptional manual for students of British and European tortricoids. The authors preface the species discussions with 20 pages of text on adults and immature stages, and with notes on collecting and techniques of morphological studies. There is a key to higher taxa, but none for the genera or species. There is a handy checklist of species and major synonyms, but the dates of original description of the species are not given in the book. Descriptions of adults are extensive and fully discuss variations of polymorphic species, but one misses descriptions of genera or even generic discussions. The text is otherwise authoritative and apparently free of major errors, covering the subjects in lucid, precise scientific prose. Genitalia are rarely mentioned in the descriptions, the reader being referred to the illustrations in Pierce and Metcalfe (1922, Genitalia Tort. Brit. Isles). This arrangement is adequate but many of the figures of Pierce and Metcalfe are so small that critical features are obscured, sometimes even absent. The classification used by Bradley and Tremewan follows the present understanding of the tortricoids as based on genitalic morphology and follows the arrangement and higher groupings of the recently revised British checklist (Kloet & Hincks, 1972), except that tribal categories have been added. The halftone plates of larval damage to host plants are a welcome addition to the work, but some figures do not have much visible larval damage evident. All species (excluding strays) are provided with descriptions of immature stages (usually including the egg and pupa, as well as the larva), biologies, and host data, leaving out only one

tortricid with unknown biology and one other tortricid for which the larva is unknown. If only we had this kind of biological knowledge for North American tortricoids. Distributions are given in full, but without the use of maps.

Since the book has valuable biological data and much of the Palearctic fauna is so closely related to the Nearctic fauna (as noted, 32 of the included species also occur in North America), I would recommend this book to those American students of the Tortricoidea who can afford it. It can be of value for North American economic entomologists as a compendium of what is known of the British fauna. For British lepidopterists it is unquestionably a magnificent summary of current knowledge of the British tortricoids, both biologically and taxonomically, and well worth investing in.

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